

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Please cancel claims 1-18 without prejudice or disclaimer.

Please amend claims 19 and 20 as set forth below.

Please add new claims 31-61 as set forth below.

1 Claim 19 (currently amended): A method for detecting ~~of diagnosing in a subject~~  
2 ~~a disease characterized by~~ at least one diagnostic marker of a disease comprising the steps of:  
3 a) providing a substrate for use in desorption spectrometry that comprises  
4 at least one addressable location, each addressable location comprising an adsorbent attached to  
5 the substrate wherein the adsorbent ~~that~~ resolves at least one of the diagnostic markers under an  
6 elution condition;  
7 b) ~~exposing~~ contacting the adsorbent with ~~substrate to~~ a biological sample  
8 from the subject;  
9 c) washing the adsorbent under the elution condition to allow retention of  
10 the diagnostic marker or markers; and  
11 de) detecting retained diagnostic marker or markers by desorption  
12 spectrometry.;

13 ~~whereby detecting retained diagnostic marker provides a diagnosis of the~~  
14 ~~disease.~~

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1 Claim 20 (currently amended): The method of claim 19 further comprising  
2 detecting ~~wherein diagnosis involves detection of~~ a plurality of diagnostic markers and the  
3 addressable locations comprise adsorbents that resolve the plurality of diagnostic markers.

1 Claim 31 (new): The method of claim 19 further comprising providing a  
2 diagnosis of the disease based on detection of the diagnostic marker or markers.

1                   Claim 32 (new): The method of claim 19 wherein the disease is selected from  
2 cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and diabetes.

1                   Claim 33 (new): The method of claim 19 wherein the biological sample is  
2 selected from tissue, blood, urine, stool, lymph, cerebrospinal fluid and interarticular fluid.

1                   Claim 34 (new): The method of claim 19 wherein the biological sample is  
2 derived from a pathological cell.

1                   Claim 35 (new): The method of claim 19 wherein the adsorbent is a hydrophobic  
2 adsorbent.

1                   Claim 36 (new): The method of claim 19 wherein the adsorbent is a thiophilic  
2 adsorbent.

1                   Claim 37 (new): The method of claim 19 wherein the adsorbent is a normal  
2 phase adsorbent.

1                   Claim 38 (new): The method of claim 19 wherein the adsorbent is an anionic  
2 adsorbent.

1                   Claim 39 (new): The method of claim 19 wherein the adsorbent is a cationic  
2 adsorbent.

1                   Claim 40 (new): The method of claim 19 wherein the adsorbent is a metal ion  
2 adsorbent.

1                   Claim 41 (new): The method of claim 19 wherein the adsorbent is a glycoprotein  
2 interaction adsorbent.

1                   Claim 42 (new): The method of claim 19 wherein the adsorbent comprises a  
2 nucleic acid.

1                   Claim 43 (new): The method of claim 19 wherein the adsorbent comprises an  
2 antibody or antibodies that bind the diagnostic marker or markers.

1                   Claim 44 (new): The method of claim 20 further comprising providing a  
2 diagnosis of the disease based on detection of the diagnostic markers.

1                   Claim 45 (new): The method of claim 20 wherein the disease is selected from  
2 cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and diabetes.

1                   Claim 46 (new): The method of claim 20 wherein the biological sample is  
2 selected from tissue, blood, urine, stool, lymph, cerebrospinal fluid and interarticular fluid.

1                   Claim 47 (new): The method of claim 20 wherein the biological sample is  
2 derived from a pathological cell.

1                   Claim 48 (new): The method of claim 20 wherein the adsorbent is a hydrophobic  
2 adsorbent.

1                   Claim 49 (new): The method of claim 20 wherein the adsorbent is a thiophilic  
2 adsorbent.

1                   Claim 50 (new): The method of claim 20 wherein the adsorbent is a normal  
2 phase adsorbent.

1                   Claim 51 (new): The method of claim 20 wherein the adsorbent is an anionic  
2 adsorbent.

1                   Claim 52 (new): The method of claim 20 wherein the adsorbent is a cationic  
2 adsorbent.

1                   Claim 53 (new): The method of claim 20 wherein the adsorbent is a metal ion  
2 adsorbent.

1                   Claim 54 (new): The method of claim 20 wherein the adsorbent is a glycoprotein  
2 interaction adsorbent.

1                   Claim 55 (new): The method of claim 20 wherein the adsorbent comprises a  
2 nucleic acid.

1                   Claim 56 (new): The method of claim 20 wherein the adsorbent comprises an  
2 antibody or antibodies that bind the diagnostic marker or markers.

1                   Claim 57 (new): The method of any of claims 19, 20 and 31-56 wherein the  
2 marker or markers comprise a polypeptide.

1                   Claim 58 (new): The method of any of claims 19, 20 and 31-56 wherein the  
2 marker or marker comprises a nucleic acid.

1                   Claim 59 (new): The method of any of claims 19, 20 and 31-56 wherein  
2 desorption spectrometry is laser desorption/ionization mass spectrometry.

1                   Claim 60 (new): The method of claim 57 wherein desorption spectrometry is  
2 laser desorption/ionization mass spectrometry.

1                   Claim 61 (new): The method of claim 58 wherein desorption spectrometry is  
2 laser desorption/ionization mass spectrometry.